MOL.20070815.0008

Steve Hoelscher

QA:N/A

From: Steve Hoelscher
Sent: Thursday, July 12, 2007 4:30 PM
To: 'Hartley, Seth'
Subject: RE: Follow up on data availability

Seth, I found time to copy summary pages from the quarterly monitoring reports (for each quarter, one has gaseous and particulate data, the other has more detailed gaseous data only). This information should be useful for your purposes. For a more detailed analysis, it would be necessary to review the correspondence files regarding the monitoring reports, the audit reports and the data recoveries on a per parameter basis. Let me know if you have any questions. I am placing 24 pages plus a copy of this e-mail in the in-house mail today.

Steve

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From: Hartley, Seth [mailto:SHartley@icfi.com]
Sent: Tuesday, July 10, 2007 3:32 PM
To: Steve Hoelscher
Cc: SHartley@icfconsulting.com
Subject: RE: Follow up on data availability

Hi Steve,

I'm sorry to keep digging up old bones, but I believe I may still need your help collecting the background data for air quality that we discussed back in February of this year.

In putting together our estimates of ambient background concentrations in western NV for the EIS we are drafting, we pulled data from three sources:

1. Schurz Paiute Tribe monitoring for PM (Tribal Environmental Exchange Network 2007),
2. The Fort Churchill Power Plant for CO, NO2, SO2 (Atlantic Richfield 2002, Appendix A, Table 2-1),
3. Fallon monitoring for ozone (State of Nevada Bureau of Air Quality Planning 2007).

However, in citing each of these in the draft EIS, #2 was rejected because the source is a draft (not final) report. I was hopeful that I would be able to use this as a reference and not have to collect the data directly from the ENSR reports, as you indicated earlier that they are large and not easily summarized. However, unless you know of another summary of the SPPC data, I think I might have to go directly to the ENSR reports.

So, I wanted to inquire with you about the option you mentioned earlier to come to the office and collect this information directly from the ENSR reports and summarize them myself. In particular, I wanted to see if that offer was still valid, to get an idea of how best to get the information from the reports (photocopy, or just transcribe the relevant data, since I'm not familiar with the format of the reports), and to estimate how long it might take to go

through them. Can you please let me know 1) if it will be ok to come collect the data from the reports myself, and 2) if there is a good time for me to come within the next couple of weeks.

Thanks again,
Seth

From: Steve Hoelscher [mailto:shoelsch@ndep.nv.gov]
Sent: Wednesday, February 14, 2007 9:20 AM
To: Hartley, Seth
Cc: Matthew DeBurle
Subject: RE: Follow up on data availability

Seth,

I recognize the PM10 monitoring sheets in the ARC Draft Fugitive Dust Work Plan as NDEP's. Table 2.1, a summary of gaseous and particulate monitoring for 1996-1998, is not NDEP monitoring, but, as we discussed, Sierra Pacific Power monitoring by its contractor ENSR (Ft. Collins, CO) in support of an application for a new power plant which was not built. I spot-checked the highest SO2 short-term concentrations and they are from the SPPC reports. However, these data have not been QA'd, processed, and summarized by NDEP (beyond a cursory review), but by ENSR. Still, that are the only data for that area. Away from urban areas, in the clean air corridor of remote desert Nevada, there would be little reason, other than to support a facility permit application, to monitor for combustion products (gaseous pollutants and PM2.5) other than transported ozone.

I checked 1998 reports and did not find any 8-hour ozone data, which I expected, since EPA may have ignored the existing ozone data and waited for three more years of ozone data to be collected after the Sept. 1997 promulgation of the 8-hour ozone standard before implementing the new standard based on a 3-year average. Also, for rural Nevada (outside Reno and Las Vegas), you will not likely find any PM2.5 data suitable for comparison to the national standards (FRM data).

Hope this helps
Steve
(775) 687-9354

From: Hartley, Seth [mailto:SHartley@icfi.com]
Sent: Monday, February 12, 2007 5:09 PM
To: Steve Hoelscher
Cc: SHartley@icfconsulting.com
Subject: RE: Follow up on data availability

Thank you for the follow up. After speaking with my manager, it does seem like this data would be useful for us, given the dearth of other data in the region. However, it sounds like the data may be difficult to for us to summarize/analyze in its current format. In digging around a little bit, we found summaries online from the fugitive dust plan for the Yerington site that seems to be from the Ft. Churchill monitoring. Specifically, Appendix A, Table 2.1, page 6 (http://ndep.nv.gov/yerington/wp_FD_finaldraft_appA.pdf) seems to have summarized most of the pollutants we'd be interested in and, I assume, this has been QA'd, processed, and summarized through NDEP.

If you could let me know if this table is, in fact, a summary of the Ft. Churchill data, it could save us all some time. Although, unless you know of another summary that has been done, I may still need to dig through data to address other standards (e.g., peak 8-hour ozone and PM2.5).

Thanks again,
Seth

From: Steve Hoelscher [mailto:shoelsch@ndep.nv.gov]

Sent: Monday, February 12, 2007 4:48 PM
To: Hartley, Seth
Subject: RE: Follow up on data availability

As we just discussed by telephone, you will check whether the approximately 10-year-old monitoring reports we have will be useful to you.

From: Hartley, Seth [mailto:SHartley@icfi.com]
Sent: Friday, February 09, 2007 1:59 PM
To: Steve Hoelscher
Cc: Hartley, Seth
Subject: Follow up on data availability

Mr. Hoelscher,

We spoke a couple of weeks ago about met and air quality data availability for western NV for an EIS I am working on. You indicated that, other than the data from the Paiute Indians (which I've collected and am processing, thanks for the information), you might have data from an old, planned project in Ft. Churchill.

I believe that data could now be useful for us. Could you check on the availability of that data for me? If it's available, I'd like to know the duration, what was sampled, and how we could obtain it.

Thanks again,
Seth Hartley

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6018-017-100

FORT CHURCHILL AIR QUALITY AND METEOROLOGICAL MONITORING PROGRAM QUARTERLY DATA REPORT

FEBRUARY 1996
MARCH 1996

Prepared for

SIERRA PACIFIC POWER COMPANY
Reno, Nevada

Prepared by

ENSR
Fort Collins, Colorado

August 1996

EXECUTIVE SUMMARY

This report provides a summary of the air quality and meteorological monitoring data collected at the Fort Churchill Power Station monitoring site near Yerington, Nevada, during the period of February 1996 through March 1996. The ambient air quality data measured during this 2-month period were well below the Nevada state and National Ambient Air Quality Standards (NAAQS). The monitoring network data retrieval statistics during the period were 85.7 percent for air quality parameters and 87.3 percent for all meteorological parameters. The minimum annual data recovery rates required for Prevention of Significant Deterioration (PSD) monitoring programs are 80 percent for air quality data and 90 percent for meteorological data. The quarterly air quality data for the Fort Churchill monitoring station are summarized below.

Pollutant	Measured Concentration			
	Fort Churchill Site		NAAQS/Nevada State[1]	
	$\mu g/m^3$	ppm	$\mu g/m^3$	ppm
NO_2				
Quarterly mean	5.6	0.003	100	0.050[2]
O_3				
1-hour maximum	113.9	0.058	235	0.120
SO_2				
1-hour maximum	18.3	0.007		NS[2]
3-hour maximum	18.3	0.007	1,300	0.500
24-hour maximum	18.3	0.007	365	0.140
Quarterly mean	2.6	0.001	80	0.030[2]
CO				
1-hour maximum	920.0	0.8	40,000	35
8-hour maximum	920.0	0.8	10,000	9
PM_{10}				
24-hour maximum	17.1		150	
Quarterly mean	6.4		50[2]	

[1]Nevada state and National Ambient Air Quality Standards are equivalent.
[2]NS = no standard.
[3]Quarterly mean concentrations are compared to annual NAAQS.

Table 4-1

Fort Churchill Continuous Air Quality Monitoring Data Summary February through ~~January~~ March 1996

Parameter	February		March		Period	
	µg/m³	ppm	µg/m³	ppm	µg/m³	ppm
NO						
Average	2.5	0.002	7.4	0.006	4.9	0.004
1-hour maximum	99.4	0.081	251.5	0.205		
NO_2						
Average	7.5	0.004	7.5	0.004	7.5	0.004
1-hour maximum	50.8	0.027	90.2	0.048		
SO_2						
Average	5.2	0.002	5.2	0.002	5.2	0.002
1-hour maximum	18.3	0.007	13.1	0.005		
3-hour maximum	18.3	0.007	13.1	0.005		
24-hour maximum	18.3	0.007	10.5	0.004		
O_3						
Average	51.0	0.026	68.6	0.035	38.3	0.020
1-hour maximum	94.1	0.048	113.7	0.058		
CO						
Average	575.0	0.05	690.0	0.6	460.0	0.4
1-hour maximum	920.0	0.08	920.0	0.8		
8-hour maximum	920.0	0.08	805.0	0.7		

EXECUTIVE SUMMARY

This report provides a summary of the air quality and meteorological monitoring data collected at the Fort Churchill Power Station monitoring site near Yerington, Nevada, during the period of April through June 1996. The ambient air quality data measured during this 3-month period were well below the Nevada state and National Ambient Air Quality Standards (NAAQS). The monitoring network data retrieval statistics during the period were 97.0 percent for air quality parameters and 96.2 percent for all meteorological parameters. The minimum annual data recovery rates required for Prevention of Significant Deterioration (PSD) monitoring programs are 80 percent for air quality data and 90 percent for meteorological data. The quarterly air quality data for the Fort Churchill monitoring station are summarized below.

Pollutant	Measured Concentration			
	Fort Churchill Site		NAAQS/Nevada State[1]	
	$\mu g/m^3$	ppm	$\mu g/m^3$	ppm
NO_2				
Quarterly mean	9.4	0.005	100	0.050[3]
O_3				
1-hour maximum	161.0	0.082	235	0.120
SO_2				
1-hour maximum	23.6	0.009		NS[2]
3-hour maximum	18.3	0.007	1,300	0.500
24-hour maximum	13.1	0.005	365	0.140
Quarterly mean	5.2	0.002	80	0.030[3]
CO				
1-hour maximum	1,259.7	1.100	40,000	35.0
8-hour maximum	916.2	0.800	10,000	9.0
PM_{10}				
24-hour maximum	14.0		150	
Quarterly mean	9.6		50[3]	

[1]Nevada state and National Ambient Air Quality Standards are equivalent.
[2]NS = no standard.
[3]Quarterly mean concentrations are compared to annual NAAQS.

Table 4-1

Fort Churchill Continuous Air Quality Monitoring Data Summary April through June 1996

Parameter	April		May		June		Quarter	
	µg/m³	ppm	µg/m³	ppm	µg/m³	ppm	µg/m³	ppm
NO								
Average	4.9	0.004	7.4	0.006	4.9	0.004	6.1	0.005
1-hour maximum	146.0	0.119	258.9	0.211	204.9	0.167		
NO_2								
Average	7.5	0.004	9.4	0.005	9.4	0.005	9.4	0.005
1-hour maximum	56.4	0.030	114.8	0.061	94.1	0.050		
SO_2								
Average	5.2	0.002	5.2	0.002	2.6	0.001	5.2	0.002
1-hour maximum	13.1	0.005	18.3	0.007	23.6	0.009		
3-hour maximum	13.1	0.005	18.3	0.007	13.1	0.005		
24-hour maximum	10.5	0.004	13.1	0.005	5.2	0.002		
O_3								
Average	78.5	0.040	80.5	0.041	84.4	0.043	80.5	0.041
1-hour maximum	115.8	0.059	139.4	0.071	161.0	0.082		
CO								
Average	458.1	0.400	458.1	0.400	572.6	0.500	495.9	0.433
1-hour maximum	916.2	0.800	916.2	0.800	1,259.7	1.100		
8-hour maximum	916.2	0.800	572.6	0.500	687.1	0.600		

EXECUTIVE SUMMARY

This report provides a summary of the air quality and meteorological monitoring data collected at the Fort Churchill Power Station monitoring site near Yerington, Nevada, during the period of July through September 1996. The ambient air quality data measured during this 3-month period were well below the Nevada State and National Ambient Air Quality Standards (NAAQS). The monitoring network data retrieval statistics during the period were 98.7 percent for air quality parameters and 100.0 percent for meteorological parameters. The minimum annual data recovery rates required for Prevention of Significant Deterioration (PSD) monitoring programs are 80 percent for air quality data and 90 percent for meteorological data. The quarterly air quality data for the Fort Churchill monitoring station are summarized below.

Parameter	Measured Concentration			
	Fort Churchill Site		NAAQS/Nevada State[1]	
	$\mu g/m^3$	ppm	$\mu g/m^3$	ppm
NO_2				
Quarterly Mean	9	0.005	100	0.050[2]
O_3				
1-hour Maximum	139	0.071	235	0.120
SO_2				
1-hour Maximum	24	0.009	NS[3]	NS
3-hour Maximum	21	0.008	1,300	0.500
24-hour Maximum	16	0.006	365	0.140
Quarterly Mean	3	0.001	80	0.030[3]
CO				
1-hour Maximum	1,260	1.1	40,000	35
8-hour Maximum	1,145	1.0	10,000	9
PM_{10}				
24-hour Maximum	46.4	NA[4]	150	NA
Quarterly Mean	13.9	NA	50[3]	NA

[1]Nevada State and National Ambient Air Quality Standards are equivalent.
[2]Quarterly mean concentrations are compared to annual NAAQS.
[3]NS = no standard.
[4]NA = not applicable.

Table 4-1

Sierra Pacific Power Company - Fort Churchill
Continuous Air Quality Monitoring Data Summary
July through September 1996

Parameter	July		August		September		Quarter	
	µg/m³	ppm	µg/m³	ppm	µg/m³	ppm	µg/m³	ppm
NO								
Average	6	0.005	5	0.004	4	0.003	5	0.004
1-hour Maximum	172	0.140	185	0.151	139	0.113		
NO_2								
Average	11	0.006	9	0.005	8	0.004	9	0.005
1-hour Maximum	79	0.042	73	0.039	60	0.032		
SO_2								
Average	3	0.001	3	0.001	5	0.002	3	0.001
1-hour Maximum	10	0.004	16	0.006	24	0.009		
3-hour Maximum	8	0.003	13	0.005	21	0.008		
24-hour Maximum	8	0.003	8	0.003	16	0.006		
O_3								
Average	80	0.041	77	0.039	63	0.032	73	0.037
1-hour Maximum	132	0.067	139	0.071	120	0.061		
CO								
Average	687	0.6	573	0.5	344	0.3	534	0.5
1-hour Maximum	1,260	1.1	1,260	1.1	687	0.6		
8-hour Maximum	916	0.8	1,145	1.0	573	0.5		

EXECUTIVE SUMMARY

This report provides a summary of the air quality and meteorological monitoring data collected at the Fort Churchill Power Station monitoring site near Yerington, Nevada, during the period of October through December 1996. The ambient air quality data measured during this 3-month period were well below the Nevada State and National Ambient Air Quality Standards (NAAQS). The monitoring network data retrieval statistics during the period were 90.4 percent for air quality parameters and 99.3 percent for meteorological parameters. The minimum annual data recovery rates required for Prevention of Significant Deterioration (PSD) monitoring programs are 80 percent for air quality data and 90 percent for meteorological data. The quarterly air quality data for the Fort Churchill monitoring station are summarized below.

Parameter	Measured Concentration			
	Fort Churchill Site		NAAQS/Nevada State[1]	
	$\mu g/m^3$	ppm	$\mu g/m^3$	ppm
NO_2				
Quarterly Mean	7	0.004	100	0.050[2]
O_3				
1-hour Maximum	133	0.068	235	0.120
SO_2				
1-hour Maximum	257	0.098	NS[3]	NS
3-hour Maximum	188	0.072	1,300	0.500
24-hour Maximum	65	0.025	365	0.140
Quarterly Mean	13	0.005	80	0.030[3]
CO				
1-hour Maximum	802	0.7	40,000	35
8-hour Maximum	687	0.6	10,000	9
PM_{10}				
24-hour Maximum	10.4	NA[4]	150	NA
Quarterly Mean	4.5	NA	50[3]	NA

[1]Nevada State and National Ambient Air Quality Standards are equivalent.
[2]Quarterly mean concentrations are compared to annual NAAQS.
[3]NS = no standard.
[4]NA = not applicable.

Table 4-1

Sierra Pacific Power Company - Fort Churchill
Continuous Air Quality Monitoring Data Summary
October through December 1996

Parameter	October		November		December		Quarter	
	µg/m³	ppm	µg/m³	ppm	µg/m³	ppm	µg/m³	ppm
NO								
Average	2	0.002	2	0.002	5	0.004	3	0.003
1-hour Maximum	97	0.079	223	0.182	189	0.154		
NO_2								
Average	6	0.003	8	0.004	8	0.004	7	0.004
1-hour Maximum	47	0.025	68	0.036	53	0.028		
SO_2								
Average	16	0.006	13	0.005	13	0.005	14	0.005
1-hour Maximum	257	0.098	31	0.012	24	0.009		
3-hour Maximum	188	0.072	21	0.008	21	0.008		
24-hour Maximum	65	0.025	16	0.006	18	0.007		
O_3								
Average	59	0.030	43	0.022	51	0.026	51	0.026
1-hour Maximum	133	0.068	82	0.042	112	0.057		
CO								
Average	458	0.4	458	0.4	115	0.1	344	0.3
1-hour Maximum	687	0.6	802	0.7	458	0.4		
8-hour Maximum	687	0.6	687	0.6	229	0.2		

EXECUTIVE SUMMARY

This report provides a summary of the air quality and meteorological monitoring data collected at the Fort Churchill Power Station near Yerington, Nevada, during the period of January 1996 through December 1996. The ambient air quality data measured during this period were well below the Nevada State and National Ambient Air Quality Standards (NAAQS). The monitoring network data retrieval statistics during the period were 93.8 percent for air quality parameters and 96.9 percent for all meteorological parameters. The minimum annual data recovery rates required for Prevention of Significant Deterioration (PSD) monitoring programs are 80 percent for air quality data and 90 percent for meteorological data. The annual air quality data for the Fort Churchill monitoring station are summarized below.

Pollutant	Measured Concentration ($\mu g/m^3$) Fort Churchill Site	NAAQS/Nevada State Standards[1]
NO_2		
Annual mean	8	100
O_3		
1-hour maximum	161	235
SO_2		
1-hour maximum	257	NS[2]
3-hour maximum	188	1,300
24-hour maximum	65	365
Annual mean	6	80
CO		
1-hour maximum	1,260	40,000
8-hour maximum	1,145	10,000[3]
PM-10		
24-hour maximum	46	150
Annual arithmetic mean	14	50

[1]Nevada state and National Ambient Air Quality Standards are equivalent.
[2]NS = No Standard
[3]Nevada Standard for elevation less than 5,000 feet above mean sea level.

Table 4-1

Fort Churchill Continuous Air Quality Monitoring Data Summary ($\mu g/m^3$) Reported by Quarter for the Period January 1996 through December 1996

Parameter	Quarter				
	First	Second	Third	Fourth	Annual
NO					
Mean	5	6	5	3	5
1-Hour maximum	312	259	185	223	312
NO_2					
Mean	8	9	9	7	8
1-Hour maximum	102	115	79	68	115
SO_2					
Mean	3	5	3	14	6
1-Hour maximum	18	24	24	257	257
3-Hour maximum	16	18	21	188	188
24-Hour maximum	16	13	16	65	65
O_3					
Mean	56	81	73	51	65
1-Hour maximum	114	161	139	133	161
CO					
Mean	401	496	534	344	444
1-Hour maximum	920	1,260	1,260	802	1,260
8-Hour maximum	804	916	1,145	687	1,145

EXECUTIVE SUMMARY

This report provides a summary of the air quality and meteorological monitoring data collected at the Fort Churchill Power Station monitoring site near Yerington, Nevada, during the period of January through March 1997. The ambient air quality data measured during this 3-month period were well below the Nevada State and National Ambient Air Quality Standards (NAAQS). The monitoring network data retrieval statistics during the period were 94.4 percent for air quality parameters and 98.2 percent for meteorological parameters. The minimum annual data recovery rates required for Prevention of Significant Deterioration (PSD) monitoring programs are 80 percent for air quality data and 90 percent for meteorological data. The quarterly air quality data for the Fort Churchill monitoring station are summarized below.

Parameter	Measured Concentration			
	Fort Churchill Site		NAAQS/Nevada State[1]	
	$\mu g/m^3$	ppm	$\mu g/m^3$	ppm
NO_2				
Quarterly Mean	6	0.003	100	0.050[2]
O_3				
1-hour Maximum	118	0.060	235	0.120
SO_2				
1-hour Maximum	31	0.012	NS[3]	NS
3-hour Maximum	29	0.011	1,300	0.500
24-hour Maximum	26	0.010	365	0.140
Quarterly Mean	5	0.002	80	0.030[3]
CO				
1-hour Maximum	687	0.6	40,000	35
8-hour Maximum	687	0.6	10,000	9
PM_{10}				
24-hour Maximum	5.8	NA[4]	150	NA
Quarterly Mean	4.3	NA	50[3]	NA

[1]Nevada State and National Ambient Air Quality Standards are equivalent.
[2]Quarterly mean concentrations are compared to annual NAAQS.
[3]NS = no standard.
[4]NA = not applicable.

Table 4-1

Sierra Pacific Power Company - Fort Churchill
Continuous Air Quality Monitoring Data Summary
January through March 1997

Parameter	January		February		March		Quarter	
	µg/m³	ppm	µg/m³	ppm	µg/m³	ppm	µg/m³	ppm
NO								
Average	1	0.001	2	0.002	4	0.003	2	0.002
1-hour Maximum	34	0.028	168	0.137	142	0.116		
NO_2								
Average	6	0.003	6	0.003	8	0.004	6	0.003
1-hour Maximum	34	0.018	73	0.039	83	0.044		
SO_2								
Average	5	0.002	5	0.002	5	0.002	5	0.002
1-hour Maximum	24	0.009	24	0.009	31	0.012		
3-hour Maximum	21	0.008	21	0.008	29	0.011		
24-hour Maximum	18	0.007	18	0.007	26	0.010		
O_3								
Average	49	0.025	59	0.030	69	0.035	59	0.030
1-hour Maximum	88	0.045	94	0.048	118	0.060		
CO								
Average	344	0.3	458	0.4	344	0.3	344	0.3
1-hour Maximum	458	0.4	687	0.6	687	0.6		
8-hour Maximum	458	0.4	573	0.5	687	0.6		

EXECUTIVE SUMMARY

This report provides a summary of the air quality and meteorological monitoring data collected at the Fort Churchill Power Station monitoring site near Yerington, Nevada, during the period of April through June 1997. The ambient air quality data measured during this 3-month period were well below the Nevada State and National Ambient Air Quality Standards (NAAQS). The monitoring network data retrieval statistics during the period were 97.7 percent for air quality parameters and 94.3 percent for meteorological parameters. The minimum annual data recovery rates required for Prevention of Significant Deterioration (PSD) monitoring programs are 80 percent for air quality data and 90 percent for meteorological data. The quarterly air quality data for the Fort Churchill monitoring station are summarized below.

Parameter	Measured Concentration			
	Fort Churchill Site		NAAQS/Nevada State[1]	
	$\mu g/m^3$	ppm	$\mu g/m^3$	ppm
NO_2				
Quarterly Mean	9	0.005	100	0.050[2]
O_3				
1-hour Maximum	132	0.067	235	0.120
SO_2				
1-hour Maximum	102	0.039	NS[3]	NS
3-hour Maximum	52	0.020	1,300	0.500
24-hour Maximum	50	0.019	365	0.140
Quarterly Mean	16	0.006	80	0.030[3]
CO				
1-hour Maximum	2,061	1.8	40,000	35
8-hour Maximum	1,603	1.4	10,000	9
PM_{10}				
24-hour Maximum	15.8	NA[4]	150	NA
Quarterly Mean	9.6	NA	50[3]	NA

[1]Nevada State and National Ambient Air Quality Standards are equivalent.
[2]Quarterly mean concentrations are compared to annual NAAQS.
[3]NS = no standard.
[4]NA = not applicable.

Table 4-1

Sierra Pacific Power Company - Fort Churchill
Continuous Air Quality Monitoring Data Summary
April through June 1997

Parameter	April		May		June		Quarter	
	µg/m³	ppm	µg/m³	ppm	µg/m³	ppm	µg/m³	ppm
NO								
Average	5	0.004	6	0.005	9	0.007	6	0.005
1-hour Maximum	160	0.130	194	0.158	254	0.207		
NO_2								
Average	9	0.005	9	0.005	8	0.004	9	0.005
1-hour Maximum	70	0.037	66	0.035	85	0.045		
SO_2								
Average	24	0.009	18	0.007	8	0.003	16	0.006
1-hour Maximum	102	0.039	52	0.020	44	0.017		
3-hour Maximum	52	0.020	39	0.015	29	0.011		
24-hour Maximum	50	0.019	21	0.008	21	0.008		
O_3								
Average	73	0.037	69	0.035	75	0.038	73	0.037
1-hour Maximum	122	0.062	132	0.067	122	0.062		
CO								
Average	344	0.3	458	0.4	687	0.6	458	0.4
1-hour Maximum	916	0.8	1,145	1.0	2,061	1.8		
8-hour Maximum	458	0.4	573	0.5	1,603	1.4		

EXECUTIVE SUMMARY

This report provides a summary of the air quality and meteorological monitoring data collected at the Fort Churchill Power Station monitoring site near Yerington, Nevada, during the period of July through September 1997. The ambient air quality data measured during this 3-month period were well below the Nevada State and National Ambient Air Quality Standards (NAAQS). The monitoring network data retrieval statistics during the period were 91.9 percent for air quality parameters and 94.3 percent for meteorological parameters. The minimum annual data recovery rates required for Prevention of Significant Deterioration (PSD) monitoring programs are 80 percent for air quality data and 90 percent for meteorological data. The quarterly air quality data for the Fort Churchill monitoring station are summarized below.

Parameter	Measured Concentration			
	Fort Churchill Site		NAAQS/Nevada State[1]	
	$\mu g/m^3$	ppm	$\mu g/m^3$	ppm
NO_2				
Quarterly Mean	8	0.004	100	0.050[2]
O_3				
1-hour Maximum	141	0.072	235	0.120
SO_2				
1-hour Maximum	26	0.010	NS[3]	NS
3-hour Maximum	13	0.005	1,300	0.500
24-hour Maximum	5	0.002	365	0.140
Quarterly Mean	3	0.001	80	0.030[3]
CO				
1-hour Maximum	1,832	1.6	40,000	35
8-hour Maximum	1,489	1.3	10,000	9
PM_{10}				
24-hour Maximum	17.2	NA[4]	150	NA
Quarterly Mean	11.6	NA	50[3]	NA

[1]Nevada State and National Ambient Air Quality Standards are equivalent.
[2]Quarterly mean concentrations are compared to annual NAAQS.
[3]NS = no standard.
[4]NA = not applicable.

Table 4-1

Sierra Pacific Power Company - Fort Churchill
Continuous Air Quality Monitoring Data Summary
July through September 1997

Parameter	July		August		September		Quarter	
	µg/m³	ppm	µg/m³	ppm	µg/m³	ppm	µg/m³	ppm
NO								
Average	4	0.003	5	0.004	4	0.003	4	0.003
1-hour Maximum	207	0.169	156	0.127	140	0.114		
NO_2								
Average	8	0.004	8	0.004	6	0.003	8	0.004
1-hour Maximum	90	0.048	75	0.040	58	0.031		
SO_2								
Average	3	0.001	3	0.001	3	0.001	3	0.001
1-hour Maximum	21	0.008	21	0.008	26	0.010		
3-hour Maximum	10	0.004	10	0.004	13	0.005		
24-hour Maximum	5	0.002	5	0.002	5	0.002		
O_3								
Average	77	0.039	71	0.036	61	0.031	69	0.035
1-hour Maximum	126	0.064	141	0.072	112	0.057		
CO								
Average	229	0.2	115	0.1	115	0.1	115	0.1
1-hour Maximum	1,832	1.6	802	0.7	916	0.8		
8-hour Maximum	1,489	1.3	344	0.3	458	0.4		

EXECUTIVE SUMMARY

This report provides a summary of the air quality and meteorological monitoring data collected at the Fort Churchill Power Station monitoring site near Yerington, Nevada, during the period of October through December 1997. The ambient air quality data measured during this 3-month period were well below the Nevada State and National Ambient Air Quality Standards (NAAQS). The monitoring network data retrieval statistics during the period were 93.2 percent for air quality parameters and 90.7 percent for meteorological parameters. The minimum annual data recovery rates required for Prevention of Significant Deterioration (PSD) monitoring programs are 80 percent for air quality data and 90 percent for meteorological data. The quarterly air quality data for the Fort Churchill monitoring station are summarized below.

Parameter	Measured Concentration			
	Fort Churchill Site		NAAQS/Nevada State[1]	
	$\mu g/m^3$	ppm	$\mu g/m^3$	ppm
NO_2				
Quarterly Mean	4	0.002	100	0.050[2]
O_3				
1-hour Maximum	124	0.072	235	0.120
SO_2				
1-hour Maximum	24	0.009	NS[3]	NS
3-hour Maximum	13	0.005	1,300	0.500
24-hour Maximum	8	0.002	365	0.140
Quarterly Mean	3	0.001	80	0.030[3]
CO				
1-hour Maximum	687	1.6	40,000	35
8-hour Maximum	458	1.3	10,000	9
PM_{10}				
24-hour Maximum	15.1	NA[4]	150	NA
Quarterly Mean	6.3	NA	50[3]	NA

[1]Nevada State and National Ambient Air Quality Standards are equivalent.
[2]Quarterly mean concentrations are compared to annual NAAQS.
[3]NS = no standard.
[4]NA = not applicable.

Table 4-1

Sierra Pacific Power Company - Fort Churchill
Continuous Air Quality Monitoring Data Summary
October through December 1997

Parameter		October		November		December		Quarter	
		µg/m³	ppm	µg/m³	ppm	µg/m³	ppm	µg/m³	ppm
NO									
	Average	4	0.003	2	0.002	2	0.002	2	0.002
	1-hour Maximum	103	0.084	55	0.045	17	0.014		
NO_2									
	Average	4	0.002	4	0.002	6	0.003	4	0.002
	1-hour Maximum	60	0.032	38	0.020	36	0.019		
SO_2									
	Average	3	0.001	3	0.001	5	0.002	3	0.001
	1-hour Maximum	13	0.005	8	0.003	24	0.009		
	3-hour Maximum	8	0.003	5	0.002	13	0.005		
	24-hour Maximum	5	0.002	5	0.002	8	0.003		
O_3									
	Average	59	0.030	49	0.025	43	0.022	51	0.026
	1-hour Maximum	124	0.063	88	0.045	96	0.049		
CO									
	Average	229	0.2	229	0.2	115	0.1	229	0.2
	1-hour Maximum	344	0.3	344	0.3	687	0.6		
	8-hour Maximum	344	0.3	344	0.3	458	0.4		

EXECUTIVE SUMMARY

This report provides a summary of the air quality and meteorological monitoring data collected at the Fort Churchill Power Station near Yerington, Nevada, during the period of January 1997 through December 1997.. The ambient air quality data measured during this period were well below the Nevada and National Ambient Air Quality Standards (NAAQS). The monitoring network data retrieval statistics during the period were 94.3 percent for air quality parameters and 94.4 percent for all meteorological parameters. The minimum annual data recovery rates required for Prevention of Significant Deterioration (PSD) monitoring programs are 80 percent for air quality data and 90 percent for meteorological data. The annual air quality data for the Fort Churchill monitoring station are summarized below.

	Measured Concentration			
	Fort Churchill Site		NAAQS/Nevada Standards[1]	
Pollutant	µg/m³	ppm	µg/m³	ppm
NO_2				
Annual mean	8	0.004	100	0.050
O_3				
1-hour maximum	141	0.072	235	0.120
SO_2				
1-hour maximum	102	0.039	NS[2]	NS
3-hour maximum	52	0.020	1,300	0.500
24-hour maximum	50	0.019	365	0.140
Annual mean	5	0.002	80	0.030
CO				
1-hour maximum	2,061	1.8	40,000	35.0
8-hour maximum	1,603	1.4	10,000[3]	9.0
PM_{10}				
24-hour maximum	17.2	NA	150	NA
Annual arithmetic mean	8	NA[4]	50	NA

[1]Nevada and National Ambient Air Quality Standards are equivalent.
[2]NS = No Standard
[3]Nevada Standard for elevation less than 5,000 feet above mean sea level.
[4]NA = not applicable.

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EXECUTIVE SUMMARY

This report provides a summary of the air quality and meteorological monitoring data collected at the Fort Churchill Power Station monitoring site near Yerington, Nevada, during the period of January through March 1998. The ambient air quality data measured during this 3-month period were well below the Nevada State and National Ambient Air Quality Standards (NAAQS). The monitoring network data retrieval statistics during the period were 90.6 percent for air quality parameters and 97.4 percent for meteorological parameters. The minimum annual data recovery rates required for Prevention of Significant Deterioration (PSD) monitoring programs are 80 percent for air quality data and 90 percent for meteorological data. The quarterly air quality data for the Fort Churchill monitoring station are summarized below.

Parameter	Measured Concentration			
	Fort Churchill Site		NAAQS/Nevada State[1]	
	$\mu g/m^3$	ppm	$\mu g/m^3$	ppm
NO_2				
Quarterly Mean	4	0.002	100[2]	0.050[2]
O_3				
1-hour Maximum	118	0.060	235	0.120
SO_2				
1-hour Maximum	26	0.010	NS[3]	NS
3-hour Maximum	13	0.005	1,300	0.500
24-hour Maximum	8	0.003	365	0.140
Quarterly Mean	5	0.002	80[2]	0.030[2]
CO				
1-hour Maximum	916	0.8	40,000	35
8-hour Maximum	802	0.7	10,000	9
PM_{10}				
24-hour Maximum	5.8	NA[4]	150	NA
Quarterly Mean	2.2	NA	50[2]	NA

[1]Nevada State and National Ambient Air Quality Standards are equivalent.
[2]Quarterly mean concentrations are compared to annual NAAQS.
[3]NS = no standard.
[4]NA = not applicable.

Table 4-1

Sierra Pacific Power Company - Fort Churchill
Continuous Air Quality Monitoring Data Summary
January through March 1998

Parameter	January		February		March		Quarter	
	µg/m³	ppm	µg/m³	ppm	µg/m³	ppm	µg/m³	ppm
NO								
Average	2	0.002	2	0.002	4	0.003	2	0.002
1-hour Maximum	106	0.086	136	0.111	56	0.046		
NO_2								
Average	4	0.002	4	0.002	4	0.002	4	0.002
1-hour Maximum	32	0.017	53	0.028	43	0.023		
SO_2								
Average	5	0.002	5	0.002	5	0.002	5	0.002
1-hour Maximum	26	0.010	24	0.009	26	0.010		
3-hour Maximum	13	0.005	13	0.005	13	0.005		
24-hour Maximum	8	0.003	5	0.002	8	0.003		
O_3								
Average	49	0.025	61	0.031	69	0.035	59	0.030
1-hour Maximum	94	0.048	104	0.053	118	0.060		
CO								
Average	115	0.1	229	0.2	229	0.2	229	0.2
1-hour Maximum	115	0.1	916	0.8	687	0.6		
8-hour Maximum	115	0.1	802	0.7	458	0.4		

EXECUTIVE SUMMARY

This report provides a summary of the air quality and meteorological monitoring data collected at the Fort Churchill Power Station monitoring site near Yerington, Nevada, during the period of April through May 11, 1998. The ambient air quality data measured during this period were well below the Nevada State and National Ambient Air Quality Standards (NAAQS). The monitoring network data retrieval statistics during the period were 95.2 percent for air quality parameters and 97.9 percent for meteorological parameters. The minimum annual data recovery rates required for Prevention of Significant Deterioration (PSD) monitoring programs are 80 percent for air quality data and 90 percent for meteorological data. The air quality data for the Fort Churchill monitoring station are summarized below.

Parameter	Measured Concentration			
	Fort Churchill Site		NAAQS/Nevada State[1]	
	$\mu g/m^3$	ppm	$\mu g/m^3$	ppm
NO_2				
Period Mean	6	0.003	NS[2]	0.050[2]
O_3				
1-hour Maximum	139	0.071	235	0.120
SO_2				
1-hour Maximum	10	0.004	NS[3]	NS
3-hour Maximum	10	0.004	1,300	0.500
24-hour Maximum	8	0.003	365	0.140
Period Mean	8	0.003	80[2]	0.030[2]
CO				
1-hour Maximum	573	0.5	40,000	35
8-hour Maximum	458	0.4	10,000	9
PM_{10}				
24-hour Maximum	29.4	NA[4]	150	NA
Quarterly Mean	12.9	NA	50[2]	NA

[1]Nevada State and National Ambient Air Quality Standards are equivalent.
[2]Quarterly mean concentrations are compared to annual NAAQS.
[3]NS = no standard.
[4]NA = not applicable.

Table 4-1

Sierra Pacific Power Company - Fort Chuchill
Continuous Air Quality Monitoring Data Summary
April through May 11, 1998

	April		May		Period	
Parameter	$\mu g/m^3$	ppm	$\mu g/m^3$	ppm	$\mu g/m^3$	ppm
NO_2						
Average	6	0.003	4	0.002	6	0.003
1-hour Maximum	51	0.027	41	0.022		
SO_2						
Average	8	0.003	8	0.003	8	0.003
1-hour Maximum	10	0.004	10	0.004		
3-hour Maximum	10	0.004	10	0.004		
24-hour Maximum	8	0.003	8	0.003		
O_3						
Average	80	0.041	79	0.040	80	0.041
1-hour Maximum	139	0.071	130	0.066		
CO						
Average	344	0.3	344	0.3	344	0.3
1-hour Maximum	458	0.4	573	0.5		
8-hour Maximum	344	0.3	458	0.4		